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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,782	07/28/2003	Tetsuya Kawanishi	240841US	5344
22850	7590	05/27/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEE, JOHN D	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/627,782	Applicant(s) KAWANISHI ET AL.	
	Examiner John D. Lee	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,4,5,7-9 and 11 is/are allowed.
- 6) ☒ Claim(s) 1,3,6,10 and 12-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1003</u> . | 6) <input type="checkbox"/> Other: ____. |

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. §§ 119 (a)-(d) or (f). All of the certified copies of the priority documents have been received.

The four (4) sheets of drawing filed with this application on July 28, 2003, are acceptable.

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claims 2, 4, 5, and 7 are objected to because of the following minor informalities: in each of these claims, the introductory phrase "means of" should be changed to "means for".

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 6, 10, and 12-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 12-15, the Examiner is not certain what is meant by "**a constitution**", "**a first constitution**", and "**a second constitution**". Does it mean "an embodiment", "a portion", "an element", "a possibility", or does it have some other meaning? Unless and until this language is clarified, the Examiner is not certain as to the exact scope of the claims, and the claims are accordingly indefinite. In claim 3, lines 2-3, there is no antecedent support for the term "the means of supplying electricity to the modulation signal input section", and the claim is thus indefinite. It is believed that the dependency of claim 6 is incorrect, since there is no antecedent support for the term "the means of splitting the mixed

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fundamental wave and triple-frequency wave into two signals having a phase difference of substantially 90 degrees"; the claim is thus indefinite. Claim 10, being dependent upon claim 6, inherently contains the same indefiniteness.

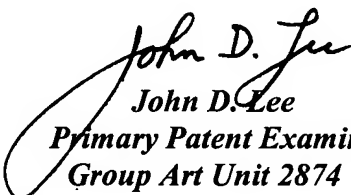
Claims 2, 4, 5, 7-9, and 11 are allowed. The prior art which can be fully read and understood by the Examiner does not disclose or suggest low-noise optical frequency converters incorporating Mach-Zehnder interferometer type SSB modulators in the manner set forth in these claims. As noted further below, however, one prior art reference which cannot be read and understood by the Examiner appears to disclose such an optical frequency converter.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. An optical frequency converter incorporating a Mach-Zehnder interferometer type SSB modulator can be seen in U.S. Patent 6,259,836 to Dodds. Means for suppressing third-order harmonics and/or sidebands in optical modulators used in optical frequency converters can be seen in U.S. Patent 5,532,867 to Hayes et al.

Both of the prior art documents cited by applicant in the Information Disclosure Statement filed on October 1, 2003, have been considered (to the extent possible) and made of record. Note the attached initialed copy of form PTO-1449. The second reference (Higuma et al) appears to disclose all or part of applicant's claimed invention. Applicant is requested to provide an English translation of this reference in order for the Examiner to ascertain its precise relevance. Applicant may also wish to comment on this reference when the translation is submitted.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. §§ 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (571) 272-2351. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562, to the technical support staff supervisor (Team 8) at telephone number (571) 272-1564, or to the Technology Center 2800 Customer Service Office at telephone number (571) 272-1626.


John D. Lee
Primary Patent Examiner
Group Art Unit 2874